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United Nations

Commission on Science and Technology for Development

Report on the twenty-first session (14–18 May 2018)

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Note

Symbols of United Nations documents are composed of letters combined with figures. Mention of such a symbol indicates a reference to a United Nations document.

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Summary

At its twenty-first session, the Commission on Science and Technology for Development discussed the role of science and technology in the context of the implementation of the 2030 Agenda for Sustainable Development and reviewed the progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international levels. In addition, it considered two priority themes: "The role of science, technology and innovation in increasing substantially the share of renewable energy by 2030" and "Building digital competencies to benefit from existing and emerging technologies, with a special focus on gender and youth dimensions". The session also included a segment on the impact of rapid technological change on the achievement of the Sustainable Development Goals, as well as science, technology and innovation policy reviews.

The Commission adopted two draft resolutions, entitled "Science, technology and innovation for development" and "Assessment of the progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society".

The Commission selected "The impact of rapid technological change on sustainable development" and "The role of science, technology and innovation in building resilient communities, including through the contribution of citizen science" as the priority themes for consideration at its twenty-second session. The Commission will identify and consider specific aspects of the themes at the forthcoming meeting of the intersessional panel, in cooperation with experts.

Further information on the session of the Commission is available from www.unctad.org/cstd.

[25 May 2018]

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Chapter I

Matters calling for action by the Economic and Social Council or brought to its attention

A. Draft resolutions for adoption by the Council

1. The Commission on Science and Technology for Development recommends to the Economic and Social Council the adoption of the following draft resolutions:

Draft resolution I
Assessment of the progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society

The Economic and Social Council,

Recalling the outcome documents of the World Summit on the Information Society,[1]

Recalling also its resolution 2006/46 of 28 July 2006 on the follow-up to the World Summit and review of the Commission on Science and Technology for Development and the mandate that it gave to the Commission,

Recalling further its resolution 2017/21 of 6 July 2017 on the assessment of the progress made in the implementation of and follow-up to the outcomes of the World Summit,

Recalling General Assembly resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development",

Recalling also General Assembly resolution 70/125 of 16 December 2015, entitled "Outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of the outcomes of the World Summit on the Information Society", in which the Assembly reaffirmed the World Summit vision of a people-centred, inclusive and development-oriented information society, where everyone can create, access, utilize and share information and knowledge, enabling individuals, communities and peoples to achieve their full potential in promoting their sustainable development and improving their quality of life, premised on the purposes and principles of the Charter of the United Nations and respecting fully and upholding the Universal Declaration of Human Rights,[2] and assessed progress made to date, identified gaps and challenges and made recommendations for the future,

Recalling further General Assembly resolution 72/200 of 20 December 2017 on information and communications technologies for sustainable development,

Taking note with satisfaction of the report of the Secretary-General on the progress made in the implementation of and follow-up to the outcomes of the World Summit at the regional and international levels,[3]

Expressing its appreciation to the Secretary-General of the United Nations Conference on Trade and Development for his role in helping to ensure completion of the aforementioned report in a timely manner,

[1] See A/C.2/59/3 and A/60/687.
[2] General Assembly resolution 217 A (III).
[3] A/73/66-E/2018/10.

Noting with appreciation the holding of the fourteenth session of the United Nations Conference on Trade and Development, in Nairobi from 17 to 22 July 2016, and its outcome document entitled "Nairobi Maafikiano: From decision to action: Moving towards an inclusive and equitable global economic environment for trade and development",[4]

Taking stock: reviewing the implementation of the outcomes of the World Summit on the Information Society

1. *Welcomes and urges* the full implementation of General Assembly resolution 70/125;

2. *Welcomes* the constructive and diverse inputs from all stakeholders in the overall review of progress made in the implementation of the outcomes of the World Summit on the Information Society;

3. *Reaffirms its commitment* to the full implementation of the outcomes of the World Summit and the vision of the 10-year review of the World Summit beyond 2015;

4. *Reaffirms* the commitment made in General Assembly resolution 70/125 to close the digital divides between and within countries, including the gender digital divide, through efforts to improve connectivity, affordability, access to information and knowledge, multilingual content, digital skills and digital literacy, acknowledging specific challenges facing persons with disabilities and specific needs, and groups in vulnerable situations;

5. *Encourages* close alignment between the World Summit process and the 2030 Agenda for Sustainable Development,[5] as called for in General Assembly resolution 70/125, highlighting the cross-cutting contribution of information and communications technology to the Sustainable Development Goals and poverty eradication, and noting that access to information and communications technologies has also become a development indicator and aspiration in and of itself;

6. *Reaffirms* its understanding that the success of the 2030 Agenda will depend on increasing access to information and communications technology;

7. *Recognizes* that information and communications technology infrastructure is fundamental to achieving the goal of digital inclusion and that digital divides persist across income groups, age groups, geography and gender, and therefore recalling its commitment to the 2030 Agenda, target 9.c, which aims to significantly increase access to information and communications technology and strives to provide universal and affordable access to the Internet in least developed countries by 2020, and in this regard notes the importance of the Connect 2020 Agenda for Global Telecommunication/Information and Communications Technology Development;

8. *Welcomes* the remarkable evolution and diffusion of information and communications technologies, underpinned by the contributions of both public and private sectors, which have seen penetration into almost all corners of the globe, created new opportunities for social interaction, enabled new business models, and contributed to economic growth and development in all other sectors, while noting the unique and emerging challenges related to their evolution and diffusion;

9. *Notes with concern* that there are still significant digital divides, such as between and within countries and between women and men, which need to be

[4] TD/519/Add.2 and TD/519/Add.2/Corr.1.
[5] General Assembly resolution 70/1.

addressed through, among other actions, strengthened enabling policy environments and international cooperation to improve affordability, access, education, capacity-building, multilingualism, cultural preservation, investment and appropriate financing, acknowledges that a gender divide exists as part of the digital divides, and encourages all stakeholders to ensure the full participation of girls and women in the information society and women's access to new technologies, especially information and communications technologies for development;

10. *Encourages* the Commission on Science and Technology for Development to continue to give due consideration to the impact of key rapid technological changes on the achievement of the Sustainable Development Goals within the respective mandates and existing resources, in accordance with General Assembly resolution 72/242 of 22 December 2017;

11. *Welcomes* the holding of World Press Freedom Day on 3 May 2018, proclaimed by the General Assembly and led by the United Nations Educational, Scientific and Cultural Organization;

12. *Welcomes* the holding of World Telecommunication and Information Society Day, celebrated annually on 17 May, led by the International Telecommunication Union;

13. *Notes* the ongoing implementation of the outcomes of the World Summit, emphasizing, in particular, its multi-stakeholder nature, the roles played in this regard by leading agencies as action line facilitators and the roles of the regional commissions, regional World Summit review initiatives and the United Nations Group on the Information Society, and expresses its appreciation for the role of the Commission on Science and Technology for Development in assisting the Economic and Social Council as the focal point in the system-wide follow-up to the World Summit;

14. *Recognizes* the value and principle of multi-stakeholder cooperation and engagement that have characterized the World Summit process since its inception and that are clearly recognized in the 2030 Agenda, and notes that many activities that support the objectives of the World Summit and the Sustainable Development Goals are being implemented by Governments, international organizations, the private sector, civil society, academic and technical communities and multi-stakeholder partnerships in their respective roles and responsibilities;

15. *Underscores* the importance of and encourages continued collaboration between the follow-up and review process of the World Summit and the Technology Facilitation Mechanism, including its multi-stakeholder forum on science, technology and innovation for the Sustainable Development Goals;

16. *Takes note* of the reports of many United Nations entities submitted as input for the elaboration of the annual report of the Secretary-General of the United Nations to the Commission on Science and Technology for Development and published on the website of the Commission as mandated in Council resolution 2007/8 of 25 July 2007, and recalls the importance of close coordination among the leading action line facilitators and with the secretariat of the Commission;

17. *Notes* the implementation of the outcomes of the World Summit at the regional level facilitated by the regional commissions, as observed in the report of the Secretary-General on the progress made in the implementation of and follow-up to the outcomes of the World Summit at the regional and international levels,[3] including the steps taken in this respect, and emphasizes the need to continue to address issues of specific interest to each region, focusing on the challenges and obstacles that each may be facing with regard to the implementation of all goals and

principles established by the World Summit, with particular attention to information and communications technology for development;

18. *Reiterates* the importance of maintaining a process of coordinating the multi-stakeholder implementation of the outcomes of the World Summit through effective tools, with the goal of encouraging collaboration and partnership among all stakeholders, including international organizations, exchanging information among action line facilitators and other stakeholders, identifying issues that need improvement and discussing the modalities of reporting on the overall implementation process;

19. *Encourages* all stakeholders to continue to contribute information to the stocktaking database maintained by the International Telecommunication Union on the implementation of the goals established by the World Summit, and invites United Nations entities to update information on their initiatives in the database;

20. *Highlights* the urgent need for the incorporation of the recommendations contained in the outcome documents of the World Summit into the revised guidelines for United Nations country teams on preparing the common country assessments and United Nations Development Assistance Frameworks, including the addition of an information and communications technology for development component, for which the United Nations Group on the Information Society has offered its assistance;

21. *Recalls* General Assembly resolution 60/252 of 27 March 2006, in which the Assembly requested the Council to oversee the system-wide follow-up to the outcomes of the Geneva and Tunis phases of the World Summit;[1]

22. *Also recalls* that, in its resolution 70/125, the General Assembly called for continuation of the annual reports on the implementation of the outcomes of the World Summit, through the Commission on Science and Technology for Development, to the Council, and reaffirms the role of the Commission, as set forth in Council resolution 2006/46, in assisting the Council as the focal point in the system-wide follow-up, in particular the review and assessment of progress made in implementing the outcomes of the World Summit;

23. *Calls upon* all States, in building the information society, to take steps to avoid and to refrain from taking any unilateral measure not in accordance with international law and the Charter of the United Nations that impedes the full achievement of economic and social development by the population of the affected countries and that hinders their well-being;

24. *Welcomes* the fact that the rapid growth in access to mobile telephony and broadband since 2005 has meant that almost two thirds of the world's inhabitants should have access to information and communications technologies within their reach, 95 per cent of the world's population lives within reach of a mobile cellular network, with 7.74 million mobile-cellular subscriptions, and 48 per cent of the world's population uses the Internet, in line with the World Summit targets.[6] The value of this progress is enhanced by the advent of new electronic and mobile services and applications for health, agriculture, education, business, development, financial and government services, civic participation and transactional services, which offer great potential for the development of the information society;

25. *Notes with great concern* that many developing countries lack affordable access to information and communications technologies and that, for the majority of the poor, the promise of science and technology, including information and communications technologies, remains unfulfilled, and emphasizes the need to

[6] See https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx and https://www.gsmaintelligence.com/research/?file=061ad2d2417d6ed1ab002da0dbc9ce22&download.

effectively harness technology, including information and communications technologies, and promote digital literacy to bridge the digital and knowledge divides;

26. *Recognizes* that information and communications technologies present new opportunities and challenges and that there is a pressing need to address the major impediments that developing countries face in accessing the new technologies, such as an appropriate enabling environment, sufficient resources, infrastructure, education, capacity, investment and connectivity, as well as issues related to technology ownership, standards and flows, and in this regard calls upon all stakeholders to provide adequate resources, enhanced capacity-building and transfer of technology and knowledge to developing countries, particularly the least developed countries, towards a digitally empowered society and knowledge economy;

27. *Also recognizes* the rapid growth in broadband access networks, especially in developed countries, and underscores the need to urgently address the growing digital divides in the availability, affordability, quality of access and use of broadband between and within high-, middle- and low-income countries and other regions, with special emphasis on supporting the least developed countries, small island developing States and Africa as a continent;

28. *Further recognizes* that the transition to a mobile-led communications environment is leading to significant changes in operators' business models and that it requires significant rethinking of the ways in which individuals and communities make use of networks and devices, of government strategies and of ways in which communications networks can be used to achieve development objectives;

29. *Recognizes* that, even with all the developments and the improvement observed in some respects, in numerous developing countries information and communications technologies and their applications are still not available to or affordable for the majority of people, particularly those living in rural areas;

30. *Also recognizes* that the number of Internet users is growing and that, in some instances, the digital divide and the knowledge divide are also changing in character, from a divide based on whether access is available to one based on the quality of access, information and skills that users can obtain and the value that they can derive therefrom, and recognizes in this regard that there is a need to prioritize the use of information and communications technologies through innovative approaches, including multi-stakeholder approaches, within national and regional development strategies;

31. *Emphasizes*, in this regard, the vital importance of multilingualism and local content in the information society, and urges all stakeholders to encourage the creation of, and access to, educational, cultural and scientific content online so as to promote quality of access and ensure that all people and cultures can express themselves and have access to the Internet in all languages, including indigenous languages;

32. *Recognizes* the importance of human capacity-building, an enabling environment and resilient information and communications technology infrastructure, as well as fostering multi-stakeholder partnerships, and assistance to countries in their efforts to strengthen the enabling role of information and communications technology for the attainment of the Sustainable Development Goals, and notes the holding of the World Telecommunication Development Conference 2017 under the overall theme "Information and Communications Technology for Sustainable Development Goals", in Buenos Aires from 9 to 20 October 2017;

33. *Urges* a continued focus on maximizing development gains from e-commerce, through the eTrade for All initiative, which provides a new approach to trade development through electronic exchanges by allowing developing countries to

more easily navigate the supply of technical assistance for building capacity in e-commerce readiness and by enabling donors to have a clear picture of the programmes that they could fund;

34. *Recognizes*, in this regard, that the United Nations Conference on Trade and Development has initiated and implemented rapid e-trade readiness surveys of least developed countries in cooperation with other donors and organizations in order to raise awareness of opportunities and challenges related to leveraging e-commerce in the least developed countries;

35. *Welcomes* the holding of the first and second sessions of the Intergovernmental Group of Experts on E-commerce and the Digital Economy, notes the agreed policy recommendations from the first session, and looks forward to the agreed policy recommendations of the second session;

36. *Takes note* of the global report of the Broadband Commission for Sustainable Development, entitled *The State of Broadband 2017: Broadband Catalysing Sustainable Development*, and notes with interest the continuous efforts of the Broadband Commission in promoting high-level advocacy for the establishment of an enabling environment for broadband connectivity, in particular through national broadband plans and public-private partnerships for ensuring that the development agenda challenges are met with appropriate impact and in conjunction with all stakeholders;

37. *Also takes note* of the launching by the Broadband Commission for Sustainable Development of the 2025 targets to support "connecting the other half" and to help bring online the 3.8 billion of the world's people who are not connected to the Internet;

38. *Recognizes* that the digital economy has enormous potential for social good, the implementation of World Summit outcomes and the achievement of the Sustainable Development Goals;

39. *Welcomes* the many initiatives of United Nations organizations which support the implementation of the World Summit action lines, and encourages all action line facilitators to continue to work towards implementation of the action lines;

40. *Welcomes* the work of the Information for All Programme of the United Nations Educational, Scientific and Cultural Organization, which aims to assist Member States in formulating policies to bridge the digital divide and ensure equitable knowledge societies;

41. *Welcomes* the work of the International Telecommunication Union to support the deployment of broadband wireless networks in developing countries, including the training of local experts;

42. *Recognizes* the work of the Food and Agriculture Organization of the United Nations to promote digital inclusion in Africa and other regions to support poverty reduction and food security;

43. *Also recognizes* the work of the International Labour Organization on the impact on jobs caused by technological change;

44. *Notes with appreciation* the work of the Global Observatory for eHealth of the World Health Organization, including its consideration of how m-health, telehealth, electronic health records and e-learning can contribute to the goals of universal health coverage;

45. *Notes with great concern* the fact that women are 12 per cent less likely than men to make use of the Internet, and 33 per cent less likely to do so in the least developed countries, draws attention to the gender digital divide, which persists in

women's access to and use of information and communications technologies, including in education, employment and other areas of economic and social development, and, in line with Sustainable Development Goal 5 on achieving gender equality and empowering all women and girls, calls upon Member States to adopt all appropriate measures, especially by significantly enhancing women's and girls' education and participation in information and communications technologies, as users, content creators, employees, entrepreneurs, innovators and leaders;

46. *Notes* the many initiatives targeted at closing the gender digital divide, including, among others, International Girls in ICT Day (International Telecommunication Union), the Global Partnership for Gender Equality in the Digital Age (the EQUALS Initiative) and the EQUALS in Tech Awards (International Telecommunication Union and United Nations Entity for Gender Equality and the Empowerment of Women), Gender-Sensitive Indicators for Media (United Nations Educational, Scientific and Cultural Organization), Women on the Homepage (United Nations Educational, Scientific and Cultural Organization), the Global Survey on Gender and Media (United Nations Educational, Scientific and Cultural Organization), the Broadband Commission Working Group on Broadband and Gender, the Best Practice Forum on Gender and Access of the Internet Governance Forum, the work being done in the World Summit on the Information Society Forum on gender issues and the work of the World Bank in a number of countries promoting opportunities for women and girls in information and communications technologies, as well as the work of many other stakeholders on this issue;

47. *Reaffirms* the commitment to pay particular attention to the unique and emerging information and communications technology challenges facing all countries, in particular developing countries, as envisaged in the relevant paragraphs of General Assembly resolution 70/125;

48. *Notes* that, while a solid foundation for capacity-building in information and communications technology has been laid in many areas with regard to building the information society, there is still a need for continuing efforts to address the ongoing challenges, especially for developing countries and the least developed countries, and draws attention to the positive impact of broadened capacity development that involves institutions, organizations and entities dealing with information and communications technologies and Internet governance issues;

49. *Recognizes* the need to focus on capacity development policies and sustainable support to further enhance the impact of activities and initiatives at the national and local levels aimed at providing advice, services and support with a view to building an inclusive, people-centred and development-oriented information society;

50. *Notes* that topics continue to emerge, such as e-environment applications and the contribution of information and communications technologies to early warning, mitigating climate change, social networking, virtualization and cloud computing and services, mobile Internet and mobile-based services, community networks, cybersecurity, the gender gap, the protection of online privacy and the empowerment and protection, especially against cyberexploitation and abuse, of vulnerable groups of society, in particular children and young people;

51. *Reaffirms* that, in the outcome document on the overall review of the implementation of the World Summit action lines, the General Assembly called for the World Summit on the Information Society Forum to be held annually,[7] and recognizes the value of the Forum in enhancing cooperation, partnership, innovation

[7] See General Assembly resolution 70/125.

and the exchange of experiences and good practices by all stakeholders in information and communications technologies for sustainable development;

52. *Notes* the holding of the World Summit on the Information Society Forum 2018, hosted by the International Telecommunication Union and jointly organized by the Union, the United Nations Educational, Scientific and Cultural Organization, the United Nations Development Programme and the United Nations Conference on Trade and Development in Geneva from 19 to 21 March 2018, under the theme "Leveraging information and communications technologies to build information and knowledge societies for achieving the Sustainable Development Goals", welcomes the holding of the World Summit on the Information Society Forum 2019 in Geneva from 8 to 12 April 2019, and notes the open consultation process, which aims to ensure wide participation in and broad ownership of the Forum;

53. *Encourages* action line facilitators to use the Geneva Plan of Action[8] as the framework for identifying practical measures to use information and communications technologies to help to achieve the 2030 Agenda, noting the World Summit on the Information Society-Sustainable Development Goals Matrix, developed by United Nations agencies;

54. *Encourages* World Summit action line facilitators to ensure close alignment with the 2030 Agenda when considering new work to implement the outcomes of the World Summit, according to their existing mandates and resources;

55. *Reiterates* the importance of the call by the General Assembly for all stakeholders to integrate information and communications technologies into approaches to implementing the Sustainable Development Goals and its request to United Nations entities facilitating the World Summit action lines to review their reporting and workplans to support implementation of the 2030 Agenda;

Internet governance

56. *Reaffirms* that the outcomes of the World Summit related to Internet governance, namely, the process towards enhanced cooperation and the convening of the Internet Governance Forum, are to be pursued by the Secretary-General through two distinct processes, and recognizes that the two processes may be complementary;

57. *Also reaffirms* paragraphs 34 to 37 and 67 to 72 of the Tunis Agenda for the Information Society;[9]

58. *Further reaffirms* paragraphs 55 to 65 of General Assembly resolution 70/125;

Enhanced cooperation

59. *Recognizes* the importance of enhanced cooperation in the future, to enable Governments, on an equal footing, to carry out their roles and responsibilities in international public policy issues pertaining to the Internet, but not in the day-to-day technical and operational matters that do not have an impact on international public policy issues;

60. *Notes* the work of the Working Group on Enhanced Cooperation, established by the Chair of the Commission on Science and Technology for Development as requested by the General Assembly in its resolution 70/125, to develop recommendations on how to further implement enhanced cooperation as envisioned in the Tunis Agenda, and also notes that the Working Group ensured the

[8] See A/C.2/59/3, annex.
[9] See A/60/687.

full involvement of Governments and other relevant stakeholders, in particular from developing countries, taking into account all their diverse views and expertise;

61. *Also notes* that the Working Group held five meetings between September 2016 and January 2018 at which it discussed inputs from Member States and other stakeholders, as stipulated by the General Assembly in its resolution 70/125;

62. *Takes note* of the report of the Chair of the Working Group,[10] which includes references to the full texts of all proposals and contributions,[11] and expresses its gratitude to the Chair and all participants who submitted inputs and contributed to the work of the Working Group;

63. *Welcomes* the good progress made by the Working Group in many areas and the fact that consensus seemed to emerge on some issues, while significant divergence of views in a number of other issues persisted, and in that regard regrets that the Working Group could not find agreement on recommendations on how to further implement enhanced cooperation as envisioned in the Tunis Agenda;

Internet Governance Forum

64. *Recognizes* the importance of the Internet Governance Forum and its mandate as a forum for multi-stakeholder dialogue on various matters, as reflected in paragraph 72 of the Tunis Agenda, including discussion on public policy issues related to key elements of Internet governance;

65. *Recalls* the decision of the General Assembly, in its resolution 70/125, to extend the mandate of the Internet Governance Forum for a further 10 years, during which time the Forum should continue to show progress on working modalities and the participation of relevant stakeholders from developing countries;

66. *Recognizes* that national and regional Internet Governance Forum initiatives have emerged, taking place in all regions and addressing Internet governance issues of relevance and priority to the organizing country or region;

67. *Recalls* General Assembly resolution 70/125, in which the Assembly called upon the Commission on Science and Technology for Development, within its regular reporting, to give due consideration to fulfilment of the recommendations contained in the report of the Working Group on Improvements to the Internet Governance Forum of the Commission;[12]

68. *Notes* the holding of the twelfth meeting of the Internet Governance Forum, hosted by the Government of Switzerland in Geneva from 18 to 21 December 2017, under the theme "Shape your digital future!";

69. *Welcomes* the holding of the thirteenth meeting of the Internet Governance Forum, to take place in the fourth quarter of 2018, and notes that, in the preparatory process for the meeting, recommendations contained in the report of the Working Group on Improvements to the Internet Governance Forum are being taken into consideration;

70. *Welcomes*, in that context, the continuous progress made with regard to the intersessional work of the Internet Governance Forum in the different modalities of connecting and enabling the next billion online, dynamic coalitions and best practice forums, as well as the contributions being made by both national and regional Internet governance forums;

[10] See E/CN.16/2018/CRP.3.
[11] See http://unctad.org/en/Pages/CSTD/WGEC-2016-to-2018.aspx.
[12] A/67/65-E/2012/48 and A/67/65/Corr.1-E/2012/48/Corr.1.

The road ahead

71. *Calls upon* United Nations entities to continue to actively cooperate in the implementation of and follow-up to the outcomes of the World Summit through the United Nations system, to take the necessary steps and commit to a people-centred, inclusive and development-oriented information society and to catalyse the attainment of the internationally agreed development goals, including those contained in the 2030 Agenda;

72. *Calls upon* all stakeholders to keep the goal of bridging the digital divides, in their different forms, an area of priority concern, to put into effect sound strategies that contribute to the development of e-government and to continue to focus on pro-poor information and communications technology policies and applications, including access to broadband at the grass-roots level, including through participative models, with a view to narrowing the digital divides among and within countries towards building information and knowledge societies;

73. *Urges* all stakeholders to prioritize the development of innovative approaches that will stimulate the provision of universal access to affordable broadband infrastructure for developing countries and the use of relevant broadband services in order to ensure the development of an inclusive, development-oriented and people-centred information society, and to minimize the digital divides;

74. *Calls upon* international and regional organizations to continue to assess and report on a regular basis on the universal accessibility of nations to information and communications technologies, with the aim of creating equitable opportunities for the growth of the information and communications technology sectors of developing countries;

75. *Urges* all countries to make concrete efforts to fulfil their commitments under the Addis Ababa Action Agenda of the Third International Conference on Financing for Development;[13]

76. *Reiterates* the importance of information and communications technology indicators in open data format as a monitoring and evaluation tool for measuring the digital divide among countries and within societies and in informing decision makers when formulating policies and strategies for social, cultural and economic development, and emphasizes the importance of the standardization and harmonization of reliable and regularly updated indicators;

77. *Acknowledges* the importance of digital measurement and monitoring tools that support the deployment and measurement of the Sustainable Development Goals;

78. *Reiterates* the importance of sharing best practices at all levels, and, while recognizing excellence in the implementation of the projects and initiatives that further the goals of the World Summit, encourages all stakeholders to nominate their projects for the annual World Summit project prizes as an integral part of the World Summit stocktaking process, while taking note of the report on the World Summit success stories;

79. *Calls upon* United Nations organizations and other relevant organizations and forums, in accordance with the outcomes of the World Summit, to periodically review the methodologies for information and communications technology indicators, taking into account different levels of development and national circumstances, and therefore:

(a) Encourages Member States to collect relevant data at the national level on information and communications technologies, to share information about country case studies and to collaborate with other countries in capacity-building exchange programmes;

[13] General Assembly resolution 69/313, annex.

(b) Encourages United Nations organizations and other relevant organizations and forums to promote assessment of the impact of information and communications technologies on sustainable development;

(c) Notes with appreciation the work of the Partnership on Measuring Information and Communications Technology for Development and the annual *Measuring the Information Society Report*, which provides recent trends and statistics on access to and the affordability of information and communications technologies and the evolution of the information and knowledge societies worldwide, including the Information and Communications Technology Development Index;

(d) Encourages the Partnership on Measuring Information and Communications Technology for Development to follow up on Statistical Commission decision 47/110 of 11 March 2016 on information and communications technology statistics,[14] and recommends in that context that the Partnership develop guidance to improve cooperation with the different stakeholders for the purposes of producing high-quality and timely information and communications technology statistics and of leveraging the potential benefits of using big data for official statistics;

(e) Notes the holding, in Tunisia from 14 to 16 November 2017, of the fifteenth World Telecommunication/Information and Communications Technology Indicators Symposium, and also notes the sixteenth Symposium, to be held in Geneva from 10 to 12 December 2018;

80. *Invites* the international community to make voluntary contributions to the special trust fund established by the United Nations Conference on Trade and Development to support the review and assessment work of the Commission on Science and Technology for Development regarding follow-up to the World Summit, while acknowledging with appreciation the financial support provided by the Governments of Finland, Switzerland and the United States of America to this fund;

81. *Recalls* the proposal in General Assembly resolution 70/125 that the Assembly hold a high-level meeting on the overall review of the implementation of the outcomes of the World Summit in 2025;

82. *Takes note with appreciation* of the report of the Secretary-General and the related discussion of the Commission on Science and Technology for Development at its twenty-first session;[15]

83. *Emphasizes* the importance of promoting an inclusive information society, with particular attention to bridging the digital and broadband divides, taking into account the considerations of developing countries, gender and culture, as well as youth and other underrepresented groups;

84. *Calls for* continued dialogue and work on the implementation of enhanced cooperation as envisaged in the Tunis Agenda;

85. *Requests* the Secretary-General to submit to the Commission on Science and Technology for Development, on a yearly basis, a report on the implementation of the recommendations contained in the present resolution as well as in the other Council resolutions on the assessment of the quantitative and qualitative progress made in the implementation of and follow-up to the outcomes of the World Summit.

[14] See *Official Records of the Economic and Social Council, 2016, Supplement No. 4* (E/2016/24), chap. I, sect. B.

[15] Ibid., 2018, *Supplement No. 11* (E/2018/31).

Draft resolution II
Science, technology and innovation for development

The Economic and Social Council,

Recognizing the role of the Commission on Science and Technology for Development as the United Nations torch-bearer for science, technology and innovation for development, and as the United Nations focal point for science, technology and innovation for development, in analysing how science, technology and innovation, including information and communications technologies, serve as enablers of the 2030 Agenda for Sustainable Development[1] by acting as a forum for strategic planning, sharing lessons learned and best practices, providing foresight about critical trends in science, technology and innovation in key sectors of the economy, the environment and society, and drawing attention to new and emerging technologies,

Recognizing also the critical role and contribution of science, technology and innovation in building and maintaining national competitiveness in the global economy, addressing global challenges and realizing sustainable development,

Recognizing further the seminal role that information and communications technologies play in promoting and empowering science, technology and innovation as enablers of development,

Recalling the 2005 World Summit Outcome[2] and General Assembly resolution 70/125 of 16 December 2015, entitled "Outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of the outcomes of the World Summit on the Information Society", in which it was recognized that science and technology, including information and communications technologies, are vital for the achievement of the internationally agreed development goals, and reaffirming the commitments contained therein,

Recalling also the entry into force, on 4 November 2016, of the Paris Agreement adopted under the United Nations Framework Convention on Climate Change,[3]

Recalling further that the United Nations Conference on Trade and Development is the secretariat of the Commission,

Recognizing that the General Assembly, in its resolution 72/228 of 20 December 2017 on science, technology and innovation for development, encouraged the United Nations Conference on Trade and Development to continue to undertake science, technology and innovation policy reviews, with a view to assisting developing countries in identifying the measures that are needed to integrate science, technology and innovation policies into their national development strategies and ensuring that such policies and programmes are supportive of national development agendas,

Recalling Economic and Social Council decision 2015/242 of 22 July 2015 providing for the extension, until 2021, of the mandate of the Gender Advisory Board of the Commission, as well as General Assembly resolutions 70/132 of 17 December 2015 and 70/213 and 70/219 of 22 December 2015 addressing, respectively, the barriers to equal access for women and girls to science and technology, and the integration of a gender perspective into development policies and programmes,

[1] General Assembly resolution 70/1.
[2] General Assembly resolution 60/1.
[3] See FCCC/CP/2015/10/Add.1, decision 1/CP.21, annex.

Recalling also the agreed conclusions of the Commission on the Status of Women on women's economic empowerment in the changing world of work,[4] adopted by the Commission at its sixty-first session, in which it, inter alia, highlighted the need for managing technological and digital change for women's economic empowerment, particularly to strengthen the capacities of developing countries, so as to enable women to leverage science and technology for economic empowerment in the changing world of work,

Taking note of the outcome document of the forum entitled "Equality and parity in science for peace and development", held in New York on 8 and 9 February 2018 to commemorate the International Day of Women and Girls in Science,

Taking note also of the importance for science, technology and innovation development policies and programmes to address various aspects of the digital divides, particularly the digital gender divide, as addressed by the EQUALS global partnership and the #eSkills4Girls initiative of the Group of 20,

Recognizing that capabilities, such as basic education and science, technology, engineering and mathematics, design, management and entrepreneurial skills, are central for effective innovation, but are unevenly distributed across countries, and that the availability, accessibility and affordability of quality education in science, technology and mathematics at the primary, secondary and tertiary levels are essential and should be promoted, prioritized and coordinated, in order to create a social environment conducive to the promotion of science, technology and innovation,

Taking note of General Assembly resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development", in which the Assembly adopted a comprehensive, far-reaching and people-centred set of universal and transformative Sustainable Development Goals and targets,

Recognizing the instrumental role of science, technology and innovation, and information and communications technologies in the achievement of a number of Sustainable Development Goals, and highlighting the role of science, technology and innovation, along with information and communications technologies, as an enabler of the 2030 Agenda for Sustainable Development to continue to address global challenges,

Taking note of General Assembly resolution 69/313 of 27 July 2015 on the Addis Ababa Action Agenda of the Third International Conference on Financing for Development, and noting the establishment of the Technology Facilitation Mechanism,

Highlighting the contribution that the Commission on Science and Technology for Development can make to the Technology Facilitation Mechanism, bearing in mind its mandate to foster multi-stakeholder collaboration and partnerships through the sharing of information, experiences, best practices and policy advice among Member States, civil society, the private sector, the scientific community, United Nations entities and other relevant stakeholders for achieving Sustainable Development Goals supported by science, technology and innovation,

Recalling that in its resolution 72/228, the General Assembly encouraged the Commission on Science and Technology for Development to promote, in the spirit of the 2030 Agenda and the Addis Ababa Action Agenda, international cooperation in the field of science and technology for development,

[4] *Official Records of the Economic and Social Council, 2017, Supplement No. 7* (E/2017/27), chap. I, sect. A.

Recalling also that in the same resolution, the General Assembly encouraged the Commission on Science and Technology for Development to discuss and explore innovative financing models as a means of attracting new stakeholders, innovators and sources of investment capital for science, technology, engineering and innovation-based solutions, in collaboration with other organizations, where appropriate,

Noting that new technologies create new jobs and development opportunities, thus increasing the demand for digital skills and competencies, and underlining the importance of building digital skills and competencies, so that societies can adapt to and benefit from technological changes,

Taking note of General Assembly resolution 72/242 of 22 December 2017, in which the Assembly requested the Technology Facilitation Mechanism and the Commission on Science and Technology for Development, through the Economic and Social Council, to give due consideration to the impact of key rapid technological changes on the achievement of the Sustainable Development Goals within their respective mandates and existing resources,

Welcoming the work of the Commission on its two current priority themes, "The role of science, technology and innovation in increasing substantially the share of renewable energy by 2030" and "Building digital competencies to benefit from existing and emerging technologies, with a special focus on gender and youth dimensions",

Recognizing the need for innovation approaches that respond to the needs of poor, grass-roots and marginalized communities in developing and developed countries and involve them in innovation processes and that embed capacity-building in the areas of science, technology and innovation as a crucial component of national development plans, inter alia, through collaboration between the relevant ministries and regulatory bodies,

Recognizing also the importance of data protection and privacy in the context of science and technology for development,

Recognizing further that technology foresight and assessment exercises, including, among others, gender-sensitive and environmentally sensitive technologies, could help policymakers and stakeholders in the implementation of the 2030 Agenda through the identification of challenges and opportunities that can be addressed strategically, and that technology trends should be analysed, keeping in view the wider socioeconomic context,

Recognizing that well-developed innovation and digital ecosystems[5] play a fundamental role in the effective digital development and facilitation of science, technology and innovation,

Recognizing also the increased regional integration efforts across the world and the associated regional dimension of science, technology and innovation issues,

Recalling the outcome document of the United Nations Conference on Sustainable Development, held in Rio de Janeiro, Brazil, from 20 to 22 June 2012, entitled "The future we want",[6] including the principles referred to therein,

Recognizing the need to mobilize and scale up financing for innovation, especially in developing countries, in support of the Sustainable Development Goals,

[5] The digital ecosystem involves components such as technological infrastructure, data infrastructure, financial infrastructure, institutional infrastructure and human infrastructure.

[6] General Assembly resolution 66/288, annex.

Noting with concern that 1.1 billion people in the world today have no access to electricity and that 2.8 billion people cook and heat their homes using open fires and simple stoves that burn traditional biomass and coal, with health, social and environmental consequences,

Recognizing that the achievement of the Sustainable Development Goals is highly dependent on increasing access to clean energy services, and that increasing the deployment of renewable energy has substantial implications for income generation and other development outcomes such as gender equality, health, environmental protection and poverty eradication,

Recognizing also that renewable energy policies should be incorporated into national development strategies and that policy mixes and a systematic approach to innovation are necessary, considering the potential role of international cooperation in increasing the share of renewables, as well as a mix of supporting policies to stimulate research and development, build skills locally, ensure affordability and create a supporting regulatory environment,

Noting the significant achievements and continuing potential contribution of science, technology and innovation and information and communications technologies, to human welfare, economic prosperity and employment,

Noting also that science, technology and innovation policies must be aligned to address the three dimensions of sustainable development, specifically, economic development, social progress and environmental protection,

Taking into consideration that traditional knowledge can be a basis for technological development and in the sustainable management and use of natural resources,

Encouraging the design and implementation of public policies that address the impact of rapid technological change on the achievement of the Sustainable Development Goals,

Noting that the success of using technology and innovation policies at the national level is facilitated by, among other things, creating policy environments that enable education and research institutions, businesses and industry to innovate, invest and transform science, technology and innovation into employment and economic growth incorporating all interrelated elements, including knowledge transfer,

Noting also various ongoing and future initiatives related to science, technology and innovation to explore important issues associated with the Sustainable Development Goals,

Recommends the following for consideration by national Governments, the Commission on Science and Technology for Development and the United Nations Conference on Trade and Development:

(a) Governments, individually and collectively, are encouraged to take into account the findings of the Commission and to consider taking the following actions:

(i) To closely link science, technology, innovation and strategies of sustainable development by prominently featuring capacity-building in information and communications technologies and science, technology and innovation in national development planning;

(ii) To promote local innovation capabilities for inclusive and sustainable economic development by bringing together local scientific, vocational and engineering knowledge, mobilizing resources from multiple channels, improving core information and communications technology and supporting

smart infrastructure, including through collaboration with and among national programmes;

(iii) To encourage and support the science, technology and innovation efforts leading to the development of infrastructure and policies that support the global expansion of information and communications technology infrastructure, products and services, including broadband Internet access, to all people, particularly women, girls and youth, and persons with special needs and from remote and rural communities, catalysing multi-stakeholder efforts to bring 1.5 billion new Internet users online by 2020 and endeavouring to improve the affordability of such products and services;

(iv) To undertake systemic research, including gender, sensitive aspects, for foresight exercises, on new trends in science, technology and innovation, and information and communications technologies and their impact on development, particularly in the context of the 2030 Agenda for Sustainable Development;1

(v) To work, with input from a variety of stakeholders, including appropriate United Nations agencies and all relevant entities and forums, such as the Commission on Science and Technology for Development and the multi-stakeholder forum on science, technology and innovation for the Sustainable Development Goals, to formulate, adopt and implement science, technology and innovation policies aimed at contributing to the implementation of the Sustainable Development Goals;

(vi) To continue giving due consideration to the impact of key rapid technological changes on the achievement of the Sustainable Development Goals within their respective mandates and existent resources, in accordance with General Assembly resolution 72/242;

(vii) To use strategic foresight exercises to identify potential gaps in education for the medium and long terms and address such gaps with a policy mix, including the promotion of gender-responsive science, technology, engineering and mathematics education, vocational training and digital and data literacy;

(viii) To use strategic foresight as a process to encourage structured debate among all stakeholders, including representatives of government, science, industry and civil society and the private sector, particularly small and medium-sized enterprises, towards creating a shared understanding of long-term issues, such as the changing nature of work and building consensus on future policies, and to help meet current and emerging demands for competence and adaptation to change;

(ix) To incorporate the provision of digital competencies, including, but not limited to, entrepreneurship and complementary soft skills, in formal education curricula and lifelong learning initiatives, while taking into consideration best practices, local contexts and needs, and ensuring that education is technology-neutral;

(x) To address the implications of fundamental changes in the digital economy for labour markets;

(xi) To undertake strategic foresight initiatives on global and regional challenges at regular intervals and cooperate towards the establishment of a mapping system to review and share technology foresight outcomes, including pilot projects, with other Member States, making use of existing regional mechanisms, and in collaboration with relevant stakeholders;

(xii) To encourage the review of progress on integrating science, technology and innovation in the achievement of the Sustainable Development Goals;

(xiii) To conduct assessments, including of gender-sensitive aspects, of national innovation systems, including digital ecosystems, drawing from foresight exercises, at regular intervals, to identify weaknesses in the systems and make effective policy interventions to strengthen their weaker components, and share outcomes with other Member States;

(xiv) To recognize the need to promote the functional dynamics of innovation systems and other relevant methodologies based on diversified policy instruments to support science, technology and innovation development priorities, in order to strengthen the coherence of such systems for sustainable development;

(xv) To encourage digital natives to play a key role in a community-based approach, including gender-responsive approaches, to science, technology and innovation capacity-building, and facilitate the use of information and communications technologies in the context of the 2030 Agenda;

(xvi) To put in place policies that support the development of digital ecosystems, bearing in mind the potential of emerging digital technologies to leapfrog existing technologies for development, that are inclusive and take into account the socioeconomic and political context of countries and attract and support private investment and innovation, particularly encouraging the development of local content and entrepreneurship;

(xvii) To implement initiatives and programmes that encourage and facilitate investment and participation in the digital economy;

(xviii) To collaborate with all relevant stakeholders, promote the application of information and communications technologies in all sectors, improve environmental sustainability, encourage the creation of suitable facilities to recycle and dispose of e-waste, and promote sustainable consumption and production patterns;

(xix) To promote science, technology, engineering and mathematics education, particularly among female students, while also recognizing the importance of complementary soft skills, such as entrepreneurship, by encouraging mentoring and supporting other efforts to attract and retain women and girls in those fields, as well as applying a gender lens when developing and implementing policies that harness science, technology and innovation;

(xx) To support the policies and activities of developing countries in the fields of science and technology through North-South as well as South-South cooperation, as complementary to but not substituting for each other, by encouraging financial and technical assistance, capacity-building, technology transfer on mutually agreed terms and conditions, and technical training programmes or courses;

(xxi) To encourage countries to progressively increase the rate of generation of high-quality skilled human resources at all levels by providing an environment for building a critical mass of human resource capacity, harnessing and effectively participating in the application of science, technology and innovation for value-addition activities, solving problems and enhancing human welfare;

(xxii) To increase support for research and development activities in renewable energy technologies and improve policy coordination and policy coherence with sectoral policies such as science, technology and innovation policies;

(xxiii) To support policies that increase financial inclusion and deepen the sources of financing and direct investments towards innovations that address the Sustainable Development Goals;

(xxiv) To ensure the inclusiveness of innovation, especially with regard to local communities, women and youth, to ensure that the scaling and diffusion of new technologies are inclusive and do not create further divides;

(b) The Commission is encouraged:

(i) To continue its role as a torch-bearer for science, technology and innovation and to provide high-level advice to the Economic and Social Council and the General Assembly on relevant science, technology, engineering and innovation issues;

(ii) To help to articulate the important role of information and communications technologies and science, technology and innovation as enablers in the 2030 Agenda by acting as a forum for strategic planning, providing foresight about critical trends in science, technology and innovation in key sectors of the economy, and drawing attention to new and emerging technologies;

(iii) To consider how its work aligns with, feeds into and complements other international forums on science, technology and innovation and efforts supporting the implementation of the 2030 Agenda;

(iv) To raise awareness and facilitate networking and partnerships among various technology foresight organizations and networks, in collaboration with other stakeholders;

(v) To promote, in the spirit of the 2030 Agenda and the Addis Ababa Action Agenda of the Third International Conference on Financing for Development,[7] international cooperation in the field of science and technology for development, including capacity-building and technology transfer on mutually agreed terms and conditions;

(vi) To raise awareness among policymakers about the process of innovation and to identify particular opportunities for developing countries to benefit from such innovation, with special attention being placed on new trends in innovation that can offer novel possibilities for developing countries;

(vii) To support efforts to build capacity to develop, use and deploy new and existing technologies in developing countries, particularly the least developed countries, small island developing States and landlocked developing countries;

(viii) To identify mechanisms for improving capabilities in developing countries for renewable energy, including capabilities to develop policies, flexible plans and regulations, and measures to improve capabilities to absorb, maintain and adapt renewable energy technologies to the local context;

(ix) To proactively strengthen and revitalize global science, technology and innovation partnerships for sustainable development, which would entail the engagement of the Commission in (a) translating technology foresight into elaborating the scope of specific international projects for targeted research, technology development and deployment and initiatives for building human resource capacity for science, technology and innovation; and (b) exploring innovative financing models and other resources contributing to enhancing the capacities of developing countries in collaborative projects and initiatives in science, technology and innovation;

[7] General Assembly resolution 69/313, annex.

(x) To explore ways and means of conducting international technology assessment and foresight exercises on existing, new and emerging technologies and their implications for renewable energy and digital competency, including discussions about models of governance for new areas of scientific and technological development;

(xi) To support countries in their efforts to identify future trends in terms of capacity-building needs, including through foresight exercises;

(xii) To discuss and explore innovative financing models, such as impact investment, as a means to attract new stakeholders, innovators and sources of investment capital for science, technology, engineering and innovation-based solutions, in collaboration with other organizations, where appropriate;

(xiii) To promote capacity-building and cooperation in research and development, in collaboration with relevant institutions, including appropriate United Nations agencies, working to facilitate the strengthening of innovation systems that support innovators, particularly in developing countries, to boost their efforts to contribute to the achievement of sustainable development;

(xiv) To provide a forum for sharing not only success stories and best practices but also failures and key challenges and learning from the results of foresight exercises, successful local innovation models, case studies and experience on the use of science, technology and engineering for innovation, including the application of new emerging technologies, in symbiotic relationship with information and communications technologies, for inclusive and sustainable development, and to share findings with all relevant United Nations entities, including through the Technology Facilitation Mechanism and its multi-stakeholder forum on science, technology and innovation for the Sustainable Development Goals;

(xv) To continue to play an active role in creating awareness of the potential contribution of science, technology and innovation to the 2030 Agenda through substantive inputs, as appropriate, to relevant processes and bodies of the United Nations, and to share findings and good practices on science, technology and innovation among Member States and beyond;

(xvi) To highlight the importance of the work of the Commission related to the implementation of and follow-up to the areas of information and communications technologies and science, technology and innovation related to the Sustainable Development Goals, with the Chair of the Commission to report at appropriate reviews and meetings of the Economic and Social Council, the high-level political forum on sustainable development and other relevant forums;

(xvii) To strengthen and deepen collaboration between the Commission on Science and Technology for Development and the Commission on the Status of Women, including sharing good practices and lessons learned in integrating a gender perspective into science, technology and innovation policymaking and implementation;

(c) The United Nations Conference on Trade and Development is encouraged:

(i) To seek funding proactively for the expansion of science, technology and innovation policy reviews, with an emphasis on the critical role of information and communications technologies in empowering science, technology and innovation and engineering capacity-building and utilization, and the implementation of the recommendations on those reviews, as appropriate, in close cooperation with United Nations agencies and international organizations;

(ii) To look into the feasibility of including elements of strategic foresight and digital ecosystem assessment in policy reviews of science, technology and innovation and information and communications technologies, possibly by including a chapter dedicated to these themes;

(iii) To broaden the framework for national science, technology and innovation policy reviews in order to integrate the Sustainable Development Goals, including a specific focus on bottom-of-the-pyramid approaches to innovation, and social inclusion;

(iv) To plan for periodic updates on progress made in countries for which science, technology and innovation policy reviews have been performed and to invite those countries to report to the Commission on progress made, lessons learned and challenges encountered in implementing recommendations;

(v) To encourage the Gender Advisory Board of the Commission to provide inputs to the policy deliberations and documentation of the Commission, to report on progress at the annual sessions of the Commission and to better integrate gender perspectives into science, technology and innovation policy reviews.

B. Draft decision for adoption by the Council

2. The Commission also recommends to the Economic and Social Council the adoption of the following draft decision:

Report of the Commission on Science and Technology for Development on its twenty-first session and provisional agenda and documentation for the twenty-second session of the Commission

The Economic and Social Council:

(a) Takes note of the report of the Commission on Science and Technology for Development on its twenty-first session;[1]

(b) Approves the provisional agenda and documentation for the twenty-second session of the Commission as set out below.

1. Adoption of the agenda and other organizational matters.

2. Progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international levels.

Documentation

Report of the Secretary-General

3. Science and technology for development: priority themes:

(a) The impact of rapid technological change on sustainable development;

Documentation

Report of the Secretary-General

(b) The role of science, technology and innovation in building resilient communities, including through the contribution of citizen science.

Documentation

Report of the Secretary-General

4. Presentation of reports on science, technology and innovation policy reviews.

5. Election of the Chair and other officers for the twenty-third session of the Commission.

6. Provisional agenda and documentation for the twenty-third session of the Commission.

7. Adoption of the report of the Commission on its twenty-second session.

[1] *Official Records of the Economic and Social Council, 2018, Supplement No. 11* (E/2018/31).

Chapter II

Progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international levels

3. The Commission considered agenda item 2 at its 3rd meeting, on 15 May, and at its 7th and 8th meetings, on 17 and 18 May 2018. It had before it the following documents:

(a) Report of the Secretary-General on the progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international levels (A/73/66-E/2018/10);

(b) Summary report prepared by the secretariat of the United Nations Conference on Trade and Development on the intersessional panel meeting held in Geneva from 6 to 8 November 2017 (E/CN.16/2018/CRP.1);

(c) Summary report prepared by the secretariat of the United Nations Conference on Trade and Development on implementing World Summit on the Information Society outcomes, 2017 (E/CN.16/2018/CRP.2).

4. At the 3rd meeting, on 15 May, the Vice-Chair (Hungary) made introductory remarks.

5. At the same meeting, the Director of the Division on Technology and Logistics and Head of the secretariat of the United Nations Conference on Trade and Development (UNCTAD) introduced the report of the Secretary-General. Statements were made by the representatives of India, Saudi Arabia and Germany.

6. Also at the same meeting, presentations were made by the following panellists: the Chair of the Working Group on Enhanced Cooperation, Benedicto Fonseca (Brazil); the Chair of the Multi-stakeholder Advisory Group of the Internet Governance Forum, Lynn St. Amour; the Head of the Corporate Strategy Division of the International Telecommunication Union (ITU), Catalin Marinescu; and the Director of Global Policy and Strategy of the Association of Progressive Communications, Anriette Esterhuysen.

7. The Commission began its general discussion of the item and heard statements by the representatives of the Russian Federation, Portugal, Saudi Arabia, the United States of America, Poland, Canada and the United Kingdom of Great Britain and Northern Ireland and the observer for Nepal.

8. A statement was also made by the observer for the International Chamber of Commerce.

9. In addition, statements were made by the representative of IT for Change, a non-governmental organization in consultative status with the Economic and Social Council, and the representative of the Internet Corporation for Assigned Names and Numbers, a business sector entity accredited to the World Summit on the Information Society.

Action taken by the Commission

Assessment of the progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society

10. At its 8th meeting, on 18 May, the Commission had before it a draft resolution entitled "Assessment of the progress made in the implementation of and follow-up to

the outcomes of the World Summit on the Information Society", submitted by the Chair on the basis of informal consultations and circulated in an informal paper in English only. The Commission was informed that the draft resolution contained no programme budget implications.

11. At the same meeting, a statement was made by the representative of the United States of America.

12. The Commission adopted the draft resolution and recommended it to the Economic and Social Council for adoption (see chap. I, sect. A, draft resolution I).

Chapter III
Science and technology for development

Priority themes:

(a) The role of science, technology and innovation in increasing substantially the share of renewable energy by 2030

(b) Building digital competencies to benefit from existing and emerging technologies, with a special focus on gender and youth dimensions

13. The Commission considered agenda item 3 at its 2nd, 4th and 6th to 8th meetings, on 14, 15, 16, 17 and 18 May. It had before it the following documents:

(a) Report of the Secretary-General on the role of science, technology and innovation in increasing substantially the share of renewable energy by 2030 (E/CN.16/2018/2);

(b) Report of the Secretary-General on building digital competencies to benefit from existing and emerging technologies, with a special focus on gender and youth dimensions (E/CN.16/2018/3);

(c) Report on the intersessional panel meeting held in Geneva from 6 to 8 November 2018 (E/CN.16/2018/CRP.1).

14. At its 1st meeting, on 14 May, the Commission held a ministerial round table on the 2018 theme of the Council, "From global to local: supporting sustainable and resilient societies in urban and rural communities", in which the following participants took part: the Minister of Science, Technology and Research of Sri Lanka, Sarath Amunugama; the Minister of Higher Education, Science, Technology and Innovation of Angola, Maria do Rosário Bragança Sambo; the Vice-Minister of Science and Technology of the Plurinational State of Bolivia, Jenny Carrasco Arredondo; the Minister of Science and Technology of South Africa, Mmamoloko T. Kubayi-Ngubane; the Minister of Higher Education of Zambia, Nkandu Luo; the Minister of Communications, Science and Technology of Lesotho, Thesele Maseribane; the Minister for Science and Technology of Pakistan, Rana Tanveer Hussain; and the Vice-Minister for Multilateral Affairs and Human Rights of Mexico, Miguel Ruiz Cabañas; the representatives of Cuba and Thailand; the observer for the Islamic Development Bank; and the representative of the United Nations Office for Disaster Risk Reduction.

15. At the same meeting, the Commission agreed to transmit to the Council during its high-level segment, to be held in New York from 16 to 19 July 2018, the Chair's summary of the discussion (see E/2018/71).

16. At the 2nd meeting, on 14 May, the Deputy Secretary-General of the United Nations Conference on Trade and Development (UNCTAD), Isabelle Durant, made an introductory statement.

17. At the same meeting, the Commission held a ministerial round table on the theme "The impact of rapid technological change on the achievement of the Sustainable Development Goals", in accordance with General Assembly resolution 72/242; the round table was moderated by the Strategic Adviser for Environmental and Science Journalism of the National Geographic Society, Andrew Revkin. The following panellists made presentations: Professor of Internet Governance and Regulation, Oxford Internet Institute, University of Oxford, Viktor Mayer-Schönberger; Assistant Professor, Space Enabled Research Group, Media Lab, Massachusetts Institute of Technology, Danielle R. Wood; principal researcher and technical manager of the biomedical translational research initiative, Council for Scientific and Industrial Research, Musa Mhlanga (South Africa); and Special

Government Adviser, Ministry of Education and Culture of Finland, Ilkka Turunen. Donovan Guttieres of the United Nations children and youth major group introduced a video.

18. An interactive discussion ensued in which the following participants took part: Mr. Hussain; Mr. Ruiz Cabañas; the Minister of Tertiary Education, Research, Science and Technology of Botswana, Ngaka Ngaka; the Minister of Information, Communications and Technology of Eswatini, Dumisani C. Ndlangamandla; Ms. Luo; Ms. Kubayi-Ngubane; the Director General of the Federal Office of Communications of Switzerland, Philipp Metzger; Ms. Carrasco Arredondo; the President of the Office of Electronic Communications of Poland, Marcin Cichy; Ms. Sambo; the Deputy Minister for Environment, Science, Technology and Innovation of Ghana, Patricia Appiagyei; Mr. Amunugama; the representatives of China and the United States of America; and the observer for Nepal. The Chair (Dominican Republic) summarized the discussion.

19. Also at the same meeting, the Commission heard a briefing by the Co-Chairs of the third multi-stakeholder forum on science, technology and innovation for the Sustainable Development Goals, Toshiya Hoshino (Japan) and Juan Sandoval Mendiolea (Mexico).

20. At its 4th meeting, on 15 May, the Commission held a panel discussion on the second priority theme, "Building digital competencies to benefit from existing and emerging technologies, with a special focus on gender and youth dimensions".

21. At the same meeting, the Director of the Division on Technology and Logistics and Head of the secretariat of UNCTAD introduced the relevant report of the Secretary-General (E/CN.16/2018/3). Presentations were made by the following panellists: the Rector of the University of Informatics Sciences of the Ministry of Higher Education of Cuba, Miriam Nicado García; the Minister for European Affairs and Equality of Malta, Helena Dalli; the Head of the Directorate of Education and Human Resources, American Association for the Advancement of Science, and member of the Gender Advisory Board of the Commission, Shirley Malcom; the founder and Chief Executive Officer of DotConnectAfrica Group, Sophia Bekele; and the Chair of the Commission on the Status of Women, Geraldine Byrne Nason (Ireland) (via a video message). Statements were also made by the Senior Director of Science and Technology for Sustainability of the National Academies of Sciences, Engineering and Medicine (United States of America), Vaughan Turekian; and the Special Science Envoy for the Ministry of Foreign Affairs and Trade of New Zealand, Peter Gluckman.

22. In the interactive discussion that followed, statements were made by the representatives of Latvia, Canada, Poland and Cuba and by the observer for Lesotho, as well as by the representatives of ITU and the United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women).

23. A statement was also made by the representative of the Foundation for Environmental Stewardship, a non-governmental organization in consultative status with the Economic and Social Council.

24. Also at the same meeting, in connection with rule 28 of the Rules of Procedure of the Functional Commissions of the Economic and Social Council, a statement was made by the Secretary of the Commission, who subsequently responded to questions and comments made by the representatives of Cuba and Canada.

25. At its 6th meeting, on 16 May, the Commission held a panel discussion on the first priority theme, "The role of science, technology and innovation in increasing substantially the share of renewable energy by 2030".

26. At the same meeting, statements were made by the observers for Nepal and Zambia and by the representatives of UN-Women and ITU.

Action taken by the Commission

Science, technology and innovation for development

27. At its 8th meeting, on 18 May, the Commission had before it a draft resolution entitled "Science, technology and innovation for development", submitted by the Chair of the Commission on the basis of informal consultations and circulated in English only.

28. A statement was made by the facilitator of the draft resolution, A Min Tjoa (Austria).

29. The Commission was informed that the resolution contained no programme budget implications.

30. A statement was made by the representative of the United States of America.

31. The Commission adopted the draft resolution and recommended it to the Council for adoption (see chap. I, sect. A, draft resolution II).

Draft decision proposed by the Chair

32. At its 8th meeting, on 18 May, on the proposal of the Chair, the Commission decided to take note of the report of the Secretary-General on the role of science, technology and innovation in increasing substantially the share of renewable energy by 2030 (E/CN.16/2018/2) and the report of the Secretary-General on building digital competencies to benefit from existing and emerging technologies, with a special focus on gender and youth dimensions (E/CN.16/2018/3).

Chapter IV

Presentation of reports on science, technology and innovation policy reviews

33. The Commission considered agenda item 4 at its 5th meeting, on 16 May.

Presentation of the preliminary findings of the ongoing science, technology and innovation policy reviews and the new science, technology and innovation policy framework

34. The Chief of the Science, Technology and Innovation Policy Section of the Division on Technology and Logistics of UNCTAD made introductory remarks.

35. The Commission held a panel discussion on the theme "New science, technology and innovation policy framework and approaches to finance innovation for the Sustainable Development Goals", which was moderated by the Co-Executive Director of the Action Group on Erosion, Technology and Concentration, Elenita Daño.

36. Presentations were made by the following panellists: the Chair of the Global Solutions Summit, Alfred Watkins; the Director of the Science, Technology and Innovation Policy Programme of the National Graduate Institute for Policy Studies, Tateo Arimoto; the founder and Managing Partner of Blue Topaz Capital, Andrea Marmolejo; and the Adviser of the SDG Lab, Chichi Umesi.

37. Statements were made by the representatives of the Democratic Republic of the Congo, Uganda and Brazil, as well as by the observers for Sri Lanka, Ghana and Zambia.

38. Statements were also made by the representatives of the Economic and Social Commission for Western Asia and ITU.

Chapter V

Election of the Chair and other officers for the twenty-second session of the Commission

39. The Commission considered agenda item 5 at its 8th meeting, on 18 May.

40. The Commission elected by acclamation the following officers for its twenty-second session:

Chair:

A Min **Tjoa** (Austria)

Vice-Chairs:

Kekgonne **Baipoledi** (Botswana)
Wang Ruijun (China)
Peter **Major** (Hungary)

41. The Commission postponed the election of the Vice-Chair from the Latin American and Caribbean States.

42. The Commission also postponed the appointment of the Rapporteur, from among the Vice-Chairs, until its twenty-second session.

Chapter VI

Provisional agenda and documentation for the twenty-second session of the Commission

43. The Commission considered agenda item 6 at its 8th meeting, on 18 May. It had before it an informal paper containing the draft provisional agenda and documentation for its twenty-first session.

44. The Commission approved the provisional agenda and documentation for its twenty-second session and recommended it to the Council for adoption (see chap. I, sect. B).

Chapter VII

Adoption of the report of the Commission on its twenty-first session

45. At the 8th meeting, on 18 May, the Vice-Chair-cum-Rapporteur, A Min Tjoa (Austria), introduced the draft report on the twenty-first session (E/CN.16/2018/L.1).

46. Statements were made by the representatives of El Salvador and Cuba, to which the Secretary responded.

47. The Commission adopted the draft report on its twenty-first session and entrusted the Rapporteur with its completion.

Chapter VIII
Organization of the session

A. Opening and duration of the session

48. The Commission held its twenty-first session at the United Nations Office at Geneva from 14 to 18 May 2018. The Commission held eight meetings (1st to 8th).

49. The 1st meeting of the session, on 14 May, was opened by the Vice-Chair, Wang Ruijun (China). The Commission elected Plácido Gómez (Dominican Republic) as Chair of the twenty-first session.

50. At the same meeting, the Secretary-General of UNCTAD and the Secretary-General of ITU made statements.

51. The Commission held an interactive discussion entitled "A conversation with great minds", which was moderated by Didi Akinyelure, a broadcast journalist for the British Broadcasting Corporation and CNBC Europe. The panellists were Jacques Dubochet, Emeritus Professor of Biophysics at Lausanne University and Nobel Prize Laureate in Chemistry in 2017; and Roger Penrose, Emeritus Rouse Ball Professor of Mathematics at the University of Oxford and Emeritus Fellow of Wadham College, Oxford, who responded to comments and questions by the representatives of South Africa, Mexico and Angola and the observer for Nepal.

B. Attendance

52. The list of participants for the session is contained in document E/CN.16/2018/INF/1.

C. Election of officers

53. At the 8th meeting of its twentieth session, on 12 May 2017, the Commission had elected by acclamation the following as members of the Bureau of its twenty-first session:

Vice-Chairs:

A Min **Tjoa** (Austria)
Wang Ruijun (China)
Peter **Major** (Hungary)
Joseph Noël Etienne Ghislain **Sinatambou** (Mauritius)

54. At the 1st meeting of the twenty-first session of the Commission, on 14 May 2018, Plácido Gómez (Dominican Republic) was elected to serve as Chair.

55. At the same meeting, the Commission appointed A Min Tjoa (Austria) to serve as Vice-Chair-cum-Rapporteur.

D. Agenda and organization of work

56. At its 1st meeting, on 14 May, the Commission adopted its provisional agenda, as contained in document E/CN.16/2018/1 and E/CN.16/2018/1/Corr.1. The agenda read as follows:

1. Adoption of the agenda and other organizational matters.

2. Progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international levels.

3. Science and technology for development:

Priority themes:

(a) The role of science, technology and innovation in increasing substantially the share of renewable energy by 2030;

(b) Building digital competencies to benefit from existing and emerging technologies, with a special focus on gender and youth dimensions.

4. Presentation of reports on science, technology and innovation policy reviews.

5. Election of the Chair and other officers for the twenty-second session of the Commission.

6. Provisional agenda and documentation for the twenty-second session of the Commission.

7. Adoption of the report of the Commission on its twenty-first session.

57. At the same meeting, the Commission approved the proposed organization of work as contained in an informal paper circulated in English only.

58. At its 5th meeting, on 16 May, the Commission appointed A Min Tjoa (Austria) to facilitate the draft resolution on science, technology and innovation for development and Peter Major (Hungary) to facilitate the draft resolution on the assessment of the progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society.

E. Documentation

59. The list of documents before the Commission at its twenty-first session is contained in the annex to the present report.

Annex

List of documents before the Commission at its twenty-first session

Document symbol	*Agenda item*	*Title or description*
E/CN.16/2018/1 and E/CN.16/2018/Corr.1	1	Provisional annotated agenda and organization of work
A/73/66-E/2018/10	2	Report of the Secretary-General on the progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international levels
E/CN.16/2018/2	3 (a)	Report of the Secretary-General on the role of science, technology and innovation in increasing substantially the share of renewable energy by 2030
E/CN.16/2018/3	3 (b)	Report of the Secretary-General on building digital competencies to benefit from existing and emerging technologies, with a special focus on gender and youth dimensions
E/CN.16/2018/L.1	7	Draft report of the Commission on its twenty-first session (circulated in an informal paper in English only)
E/CN.16/2017/CRP.1[a]	3	Report on the intersessional panel meeting (6-8 November 2018)
E/CN.16/2017/CRP.2[b]	2	Report on implementing World Summit on the Information Society outcomes, 2017
E/CN.16/2017/CRP.3[c]	2	Report of the Chair of the Working Group on Enhanced Cooperation
E/CN.16/2018/INF/1		List of participants

[a] Available from http://unctad.org/meetings/en/SessionalDocuments/ecn162018crp1_en.pdf.
[b] Available from http://unctad.org/meetings/en/SessionalDocuments/ecn162018crp2_en.pdf.
[c] Available from http://unctad.org/meetings/en/SessionalDocuments/ecn162018crp3_en.pdf.

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